Tourism inward investment and regional economic development effects: Perspectives from tourism satellite accounts

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Abstract

The regional economic contribution of tourism-related inward investment is difficult to assess. This is due to data availability problems, and with inward investment in such industries often dwarfed by that in either manufacturing or other services. There are, however, cases where tourism demand represents a significant proportion of regional economic demand, and often in regions where there are economic development challenges. This paper suggests that the development of regional tourism satellite accounts (TSAs), and subsequent analysis of them, is a valuable means of analyzing the different economic characteristics of the externally owned and domestically owned tourism-related sectors.

Key words: tourism inward investment; asset ownership; tourism satellite accounts; regional economic development

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1. Introduction

Physical capital, human capital and technology are key elements for economic growth and development (Solow, 1956, Romer and Chow, 1996). Poorer regions facing gaps in the provision of these factors might benefit from inward investment to provide such factors. Selected industries supported by tourism demands typically have relatively low barriers to entry in terms of physical capital, human capital and technology. However, these resources may not be available at sufficient scale in poorer regions (Jamieson et al., 2004, Fayissa et al., 2008). For these reasons tourism industry investment coming from outside of the region (inward investment), either Foreign Direct Investment (FDI) or investment from other regions within the nation, might have marked positive developmental effects for a region (Ashley et al., 2000, Frey and George, 2010). Moreover, incoming investment could be more productive than that originating in a given region. For example in more capital intensive tourism-related sectors (such as large hotels, transportation) it may be far more difficult for regionally owned firms to gain a foothold in the presence of large inward investors, and with such sectors in poorer regions typically being owned by firms outside the region or indeed the state.

In summary, external tourism industry capital provides factors that potentially assist regional economic growth. However, dependence on external capital in the presence of a regional sector incapable of providing tourism products to a high standard may work to constrain longer term economic development effects. Indeed, the negative side of tourism as a contributor to economic development has been argued to be largely a foreign-inward investment related phenomenon (Brohman, 1996).

Assessing these issues systematically has been made difficult because of a paucity of frameworks that separate out the nature, scale, and linkages of domestic (i.e. regionally-owned) firms from those not locally owned (see for example, Endo, 2006, Dwyer et al., 2010).

We show that the analysis of outputs from the framework of tourism satellite accounts (TSAs) is one useful means of accounting for differences in the economic characteristics of the externally owned and regionally owned tourism sectors. The TSA framework leverages valuable information for policymakers and destination managers, and enables more grounded perspectives on the development potential and limits associated with the externally owned tourism sector, particularly in the context of productivity gaps between the regional and externally owned sector. The different characteristics of the regionally and externally owned tourism sector in this respect are examined through the lens of the Welsh economy (a region of the UK). The statistical approach to the development of the TSA in the region has been from the 'bottom up', and a fully featured TSA developed that treats the region in a similar way to a national reference economy, and with all extra-regional economic actors (tourists, firms) being 'foreign'. This means that both tourists and firms originating (or owned) from outside of Wales are defined as 'foreign' in this study, including those from other countries and other regions of UK. Therefore 'foreign' refers to non-regional/non-Welsh in this context, and 'domestic' refers to regional/Welsh. There has been limited progress to date in framing tourism accounts in this way to explore how differences in asset ownership lead to different regional economic contributions, and then to explore in more detail the scale of the gap between the regionally owned and externally owned tourism sector. It is important to recognise the scale of the productivity gap between the domestic and foreign sector and the ability of regional tourism firms to compete with externally owned rivals.

The remainder of the paper is structured as follows. The second section explores the expected consequences associated with inward investment in tourism-related sectors and why a more detailed accounting of differences between the locally and externally owned sectors is useful. The third section introduces the methods used to separate out the externally from the regionally owned elements of tourism-related sectors within the regional TSA framework. The fourth

reveals some of the main differences between regionally and externally owned sectors in the case region. The final section concludes with a discussion of some of the practical implications for policy and destination management, the limitations of the framework, and priorities for further research.

2. External ownership, productivity advantages and the tourism sector

Inward investment can be one avenue to improve regional economic development prospects. Typically, inward investment embraces capital, technology and management expertise to create goods and services. Externally owned firms may exhibit very different characteristics, compared to those regionally owned. Multinational or multi-regionally located firms might have higher technological levels, richer tangible and intangible assets, better managerial skills, more resilience and greater bargaining power due to their flexibility in relocating production, and lower cost of capital. In this respect transactions cost and market power approaches show that the tangible and intangible assets acquired by multinational firms are likely to compensate for the higher costs occurred by operating abroad (Benfratello and Sembenelli, 2006; Caves, 1996; Dunning and Lundan, 2009). In the case of tourism, regional firms might have better knowledge of regional markets, consumer preferences, and regional business practices, whereas inward investors to a region might overcome these advantages with comparatively superior managerial expertise or technological capabilities.

Theoretical frameworks then reveal potential for foreign firms having advantages in terms of their different capabilities and expertise which make them more productive than a regionally-owned cohort and could result in a stronger contribution to the regional economy. Therefore externally owned capital offers the prospect of employment and capital transfer and beneficial development effects. (Farrell, 2008, UNCTAD, 2007).

Differences in productivity between externally and locally owned enterprises, and the consequences of this, have been widely researched. Typically, in the UK at least, this has been

examined through the lens of differences between foreign and domestically owned manufacturing firms, rather than between single and multi-regional firms. Productivity differences might occur here because of an ownership or a structural effect. The latter effect reflects the disproportional distribution of foreign (or externally owned) enterprises in relatively higher productivity sectors, while the former refers to the real aggregate productivity advantages of the foreign firm compared to their domestic counterparts producing the same goods. Davies and Lyons (1991) show that even when allowance is made for structural effects that foreign owned manufacturing firms in the UK were more productive than their domestic counterparts (see also Doms and Jensen, 1998; Driffield and Munday, 2000; Girma et al., 2008). Temouri et al. (2008), however, have also argued that the productivity difference between domestic firms and foreign firms may not be due to ownership, but may simply reflect a difference between purely domestic-owned firms and multinational enterprises. For tourism-related sectors there has been a paucity of research examining the relative importance of structural and ownership effects in explaining productivity differences and with this hindered by a lack of appropriate data. We show in this paper that the framework offered by modified tourism satellite accounts is a valuable means of addressing this problem.

Oulton (1998) also explored reasons why foreign firms have higher productivity than their domestic counterparts. Oulton revealed that UK-owned companies may face a higher cost of capital than foreign-owned ones. For example, UK-owned companies may acquire capital at higher cost, and this particularly applied to smaller firms constrained by having to acquire funds for investment from the domestic financial system (Caballero 1997; Chirinko 1993; Hubbard 1998; Miles 1993). Moreover, domestic firms may prefer less capital-intensive technologies because they face a less desirable risk-return trade-off than foreign firms, with foreign-owned companies better able to spread risks globally. Then in the case of tourism-related sectors domestic firms may be present in more labour intensive segments, and with foreign ownership

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being more highly concentrated in high productivity sectors.

The extent of productivity differences are important developmental issues in regions that are more tourism dependent with fewer opportunities for diversifying the economic base, and where there is a stronger reliance on external capital (Andergassen and Candela, 2013, Pratt, 2015). Indeed it may be the case in some tourism-related sectors that activity is almost entirely non-locally owned and with an area almost totally dependent on external capital in higher productivity elements of the tourism economy. However, with any dependence there are expected to be costs. For example, Brohman (1996) suggests that the shortcomings associated with tourism industries in less developed areas and regions are more explicitly related to external ownership and include: loss of control over local resources; extra-regional leakage of tourism earnings; low multiplier and spread effects outside of specific tourism enclaves; investments reinforcing patterns of socioeconomic inequality and then rising alienation of local populations and loss of cultural identity. While these issues are typically understood through the lens of the developing world, some of these factors are also relevant to regions in more developed states where there is a higher dependence on tourism demands. Brohman (1996) shows that external dependency can seriously reduce tourism industry potential to generate broad based growth. Leakage of earnings, in particular, is related to high levels of inward investment in tourism-related industries, especially within tourism enclaves, where the externally funded investment covers hotel accommodations, restaurants, transportation links, travel agencies and other services. Imported goods and services often worsen the balance of payments in the host because of consequent profit repatriations and payments (UNCTAD, 2007).

To summarise, inward investment in tourism-related sectors could be connected to different patterns of resource use, different types of labour demand, and ultimately could lead to a very different set of regional economic effects and thus implications for growth prospects. Moreover,

inward investors in tourism-related sectors might also serve different types of tourist demand. The review also suggests externally owned tourism-related firms in a region will exhibit very different characteristics, compared to regionally owned capital, and display productivity differences, perhaps occurring as a result of both ownership and structural effects. As a first step it is important to account for differences in tourism-related sectors based on ownership characteristics (i.e. in this paper regionally versus non-regionally owned). This is expected to reveal productivity and other economic differences based on ownership and with a series of developmental consequences following from this. High levels of dependence on external capital are expected to bring costs for regions.

3 Regional tourism satellite accounts decomposed by asset ownership

There is limited work that shows how externally or regionally owned tourism sectors might differently support regional growth. In the case of the UK regions, we suggest, this links to issues of data availability, and in particular the fact that tourism accounting frameworks have failed to differentiate the supply side of the regional tourism economy based on asset ownership. In the UK, and in common with many other states, it is not easy to distinguish between domestic and foreign investors in tourism-related sectors; and then managerial and franchising operations which have not committed equity capital. This also links to a paucity of data on inward investment in tourism-related sectors.

We emphasise at the outset that our lens of analysis is the regional economy of Wales. Any reference to 'domestic' firms or supply thus relates to those owned and controlled in Wales - effectively those headquartered in the region, although it is accepted that for a small number of shareholder-owned 'Welsh' tourism firms, ownership will be geographically wider. Non-regional firms/supply thus includes firms operating in Wales that are owned and/or controlled from elsewhere in the UK or abroad. There are a number of reasons for this. First, this conforms to the treatment of the region within World Tourism Organisation (UNWTO) standard 'bottom

up' regional TSA development (Jones et al., 2009). Second it allows us to consider the impact of tourism activity, leakages and investments on regional development through the lens of the regional economic base. Third we argue that inter-regional UK firms and international firms operating in Wales possess scale and other advantages, and display behaviours, that are similar to each other compared to those of Welsh-owned tourism firms that are typically much smaller and operate in a single region. It is accepted at this point that this perspective can cause problems where tourism-related firms in a region are taken over by external capital through time. However, in these cases the regional 'target' firm being subsumed into a larger group is expected to gain advantages from this change of ownership.

In this context a suitably refined tourism satellite account (TSA) framework offers a first step in an analysis of how inward investment in tourism-related sectors might contribute differently to regional economic prospects in terms of employment, output and productivity, and then becomes a precursor to further analysis of the longer term effects that result from tourism inward investment.

In the remainder of this section we show in the case region of Wales how external ownership in the tourism-related sector can be framed within a TSA. The TSA is the *de-jure* measure to record activities of tourism-related economic activities. It employs the principles and the structure of a System of National Accounts (SNA) to measure the direct economic contributions of both domestic and international tourism to a national economy (Hara, 2008; Frechtling, 2010). Importantly the TSA framework allows a reconciliation of demand for tourism products and the supply of those same products, and allows the identification of how far tourism-related and other sectors of the economy are dependent upon tourism as opposed to resident demands. The framework is valuable in showing how different types of visitor spending support varying levels of activity in tourism-related sectors, and is thus useful in policymaking and in destination management. The TSA also allows the identification of the gross value added

genuinely attributable to tourism demands allowing comparison of tourism with other parts of the economy (see for example, Jones et al., 2003).

Included in inward investment in the regional case presented is both the activity of overseas firms, and of those from other parts of the UK. As noted above the justification is that in Wales, inward investment from rest of UK firms often involves UK multinationals or large UK-domestic firms which have similar productivity characteristics to overseas firms (see Bellak, 2004; and in the earlier review Temouri et al., 2008), and with returns to capital and innovation arising outside the region. Then in a regional context the work reveals the extent of the extra-regional tourism-related industry, and how it differs from the regionally-owned sector. Wales offers a particularly useful lens through which to consider issues of capital ownership as it shares features with more tourism specialised countries, regions and destinations, and has the statistical structures available that enable an accounting of the tourism economy that are malleable to examine the scale of extra-regional ownership and a series of economic development issues (Jones et al., 2010).

The case illustrates how the outputs from the regional TSA can be altered in structure. First, the approach enables an estimate of the comparative economic contribution in terms of employment, output and productivity for both inward investing and regionally owned tourism-related businesses. This permits an examination of extra-regional dependence in tourism-related sectors, and then with links to potential repatriation of profits/other value added, but also the extent to which extra-regional businesses might be more productive than local businesses. Second, the approach allows some analysis of the role of human capital in tourism production, as well as establishing the extent to which tourism industries employ workers of different education, income levels etc. compared to other industries. Our approach additionally reveals further information on potential extra-regional leakages - for example, in terms of migrant labour, and purchases made outside of the region.

Table 1 shows the components of a standard TSA framework (see TSA Recommended Methodology Framework, UN et. al, 2008) and Additional information for TSA as TSA-table 11. While the research undertaken permitted a series of structural changes to the existing regional TSA framework, this paper focuses more on key findings. Further more detailed tables are found in Appendix 1 to the paper (i.e. the summarised TSA Tables (5, 7 and 11) relevant to our analysis).

A key part of the analysis is to construct a 'TSA Table 5' (the production accounts of tourism industries and see Appendix 1 for full estimated TSA Table 5), but with this splitting the supply of tourism products, for each tourism-related industry, between those supplied by regional and extra-regional organizations. The data to support this complex but important separation were taken from a number of sources:

- First, the *Business Structure Database* (BSD) which includes administrative sources such as value added tax (VAT) and pay as you earn (PAYE) data, and covers almost all UK businesses. Data here was accessed through a secure data agreement with the ONS Virtual Microdata Laboratory; the majority of the output estimation for the various tourism industries are from the BSD firm-level datasets.

- Additional information was taken from Bureau van Dijk's FAME database which collates information from UK Companies' House on firm activities, turnover and employment, including ultimate and intermediate ownership of companies; the FAME database was used to adjust and verify any inconsistency found in the BSD database.

- Commercial tourism listings, both published and requested special runs, including information from Visit Wales, Booking.com and the *UK Campsites Directory* and from both commercial and regional government sources, which gave information on sector and businesses' scale and ownership. Tourism businesses' websites were used in some

cases to fill missing data for micro firms.

- The data sources used to estimate demand for the products of tourist-related industries came from analysis of the *UK Tourism Satellite Account* 2013, *International Passenger Survey* 2013, *Great Britain Day Visit Survey* 2013, *Great Britain Tourist Survey* 2013, *CAA Passenger Survey Report* 2015, *Annual Survey of Hours and Earnings* (2013), and ONS *Census* data.

- An emailed questionnaire to a sample of tourism-related firms in Wales covering key variables on turnover and employment, together with more contextual information. This gained 81 usable responses (see Appendix 2 for further details of responses); this was followed by a programme of 25 detailed face-to-face interviews across Wales with both private and public sector tourism providers (see also Appendix 2). The primary data collected by interviews and surveys were used to sense-test the regional and non-regional purchases by tourism businesses in Wales.

- Employment data for TSA-table 7 was derived from the NOMIS database (*Business Register and Employment Survey*). The level of education by employees across tourism industries in TSA-Table 11 was derived from the *Annual Survey of Hours and Earnings* (2013), the residence origin and whether claiming state benefits in TSA-table 11 were extracted from *Annual Population Survey* (2013)

Figure 1 shows how the different data sources were used to inform the analysis that follows. Following this process of data collection and collation, product supply[1] arising from regional and non-regional businesses was estimated for 11 tourism commodity classifications initially, and then aggregated as 6 tourism industry categories reported in this paper following the

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[1] At basic prices, and excluding VAT.

structure of UK Tourism Satellite Account (2013). Further, an extended and refined 'TSA-Table 7' (Appendix A), covering employment in tourism-related industries was constructed, to include the employment and, by reconciliation with TSA-Table 5 (Appendix A), the productivity of labour - both in terms of gross value added (GVA) per full-time equivalent employee (FTE) and output per FTE in the regional and non-regionally owned tourism-related sectors (and for all non-tourism sectors in aggregate). Finally, the intention was to develop a TSA-Table 11 (Table 5) – 'Additional information for TSA'. This was developed to include a financial account, purchasing account, employment account, skills and qualifications account, and household income account distinguished for regional and non-regional industries. In the event, data were only adequate to estimate selected variables by location of ownership; for example full time/part time employment split; employee country of birth; and some limited information on purchasing behaviours - together with derived intelligence on compensation of employees. The reference year for what follows was 2013.

4 Analysis

This section reveals some of the key findings from the Welsh analysis, showing differences between the externally and regionally owned tourism-related sectors.

Table 2 and Figure 1 about here

Table 2 uses the TSA framework to reveal the supply of regional tourism products and how far this is accounted for by regional or extra-regional firms. In three tourism-characteristic product groups output was largely provided by non-regional firms. However, in the large Accommodation services and Food & beverage serving sectors more of the output consumed by tourists is provided by regional firms. Table 2 reveals that in total, regionally owned tourism-related businesses supply 48% of the tourism products and services and non-regionally owned businesses supply 52%.

Tourism products related to Passenger transport services are almost wholly accounted for by

the non-regionally owned sector, and with scale important in sector competitiveness. There is some variation in Passenger transport services (not shown in the summarised Table 2). For example, in the case of Road passenger services, non-regional firms accounted for 45% of output. Table 2 evidences a clear differentiation of activity in parts of the tourism-related sector in the region, and with stronger regional representation in the Accommodation services and Food & beverage sectors.

Table 3 shows for selected sectors the productivity differences between regionally owned firms and extra-regional firms in respect of gross value added per full time equivalent employee (GVA/FTE). It is noted that GVA/FTE as a productivity measurement has been criticized for not always being able to accurately reflect firms' productivity. This is because GVA could be affected by firms' pricing strategy and how firms report their costs in the database, which may not truly reflect the efficiency of the production process. Notwithstanding with the information available this was the best indicator of productivity that could be employed in the analysis.

Here the focus is on tourism products where there is some significant regional presence. First Table 3 reveals that in sectors where regional ownership is greater, GVA per FTE is relatively low (Accommodation services and Food & beverage sectors) and further that in Accommodation services there is a strong productivity advantage for the non-regionally owned sector. Indeed Table 3 reveals the very strong productivity advantage enjoyed by non-regional firms, and with the expectation that this reveals something about differentiated products within these broad product groups. For example, non-regionally owned Accommodation sites to be larger hotels. In Passenger transport services, regionally-owned firms are restricted almost totally to road transport.

Closer observation of Accommodation services in Wales reveals differences exemplified in brand name and reputation; greater availability of equity finance; better knowledge and access to international tourism markets; better trained personnel, management and reservation

systems; and better organizational and IT capability to integrate separate value-adding activities. For example, non-regionally owned hotels are typically part of large international chains, and with fieldwork for this study (including analysis of commercial and government business listings) revealing regionally owned businesses in the sector more likely small and medium-sized hotels/bed and breakfasts, often in more rural locations.

Table 3 about here

The findings in Table 3 could be replicated in analyses of other industry sectors in Wales in terms of ownership, but the scale of the productivity differences in selected tourism-related sectors is much larger, for example, than typically found in manufacturing sectors. Then Table 3 reveals a considerable gap between the regionally-owned and externally owned sectors.

It is suggested that the productivity difference based on asset ownership might in different activities reflect both the higher productivity of externally owned firms (ownership effect) and/or a disproportional distribution of externally owned firms in higher productivity sub-sectors (structural effect) (Davies and Lyons, 1991). Tables 2 and 3 provide evidence for both types of effect. Table 3 shows non-regional businesses in tourism-related sectors have a productivity advantage ranging up to over 10 times greater than their regional counterparts. Passenger transport services, Transport equipment rental services, Cultural, sports & exhibition activities are the 3 tourism sectors where non-regional businesses have the largest productivity advantages, and these same sectors are also the tourism-related sectors where non-regional ownership contributes most of the output (78%, 71% and 69% respectively) out of each sector respectively. Whereas non-regional Food & beverage serving activities businesses overall have the smallest productivity advantage of 10% over the regional ones in Table 3, and Table 2 indicates that Food & beverage serving activities is also the sector that produces the least output (35%) among all tourism sectors from non-regional businesses. The disproportionate relationship between productivity differences and output contributed across different tourism-

related sectors suggest it is not purely because of ownership advantages that non-regional businesses contribute more. The evidence reveals a higher concentration of non-regional businesses in higher productivity tourism-related sectors.

Productivity differentials in the Food & beverages sector are smaller than those found in Accommodation services, although differences here possibly also relate to national chain restaurants being larger and having access to brand name, reputation, better knowledge and management (see also Sean Hyun and Kim, 2011).

Passenger transport services feature very large productivity differences. These services in Wales are dominated by non-UK firms and with almost zero regionally-owned supply in Air and water transport. Rail is a good example where regionally owned activity is restricted to hobby and mountain railways in North and West Wales (for example, Brecon and Snowdon Mountain Railways) and with this being entirely different from national passenger rail services in terms of structure and product. Road transport includes taxi operations and other passenger land transport. There is some local ownership of bus/minibus transport services, and reasonably large firms. However on longer distance routes, tourist coaches and scheduled coaches that connect Wales with the rest of the UK, typically non-regionally owned operators (such as Stagecoach) predominate. Such routes are expected to have much higher passenger-driver ratios compared to locally owned taxis or domestic coaches. Therefore the differences in productivity result from differences in the structure and scale of businesses, rather than a result of regional and non-regional businesses supplying the same product in a similar way.

Interestingly Table 3 also provides evidence of a strong extra-regional productivity advantage in Cultural, sports etc. activities. Regionally owned institutions such as museums are subsidized to some extent (for example, the network of National Museums of Wales offers free entry). This might lead to a lower productivity in terms of estimated GVA or output per FTE, with this being based on market income. Exhibitions and conferences include activities of exhibition and

fair organizers, activities of conference organizers, letting and operating of conference and exhibition centers. An estimated 93% of those businesses in Wales are non-regionally owned. Once again differences here reflect fundamental differences in the services being offered, and with regionally owned firms of much smaller scale (see also on this issue, Jones and Li, 2015).

Table 4 presents estimates of GVA for each industry that arise from the purchases of tourists (Tourism GVA or TGVA) (see *TSA Recommended Methodology Framework*, UN et. al, 2008). The results here are achieved by multiplying the GVA of each industry by the proportion of commodity sales that are to tourists. Table 4 reveals that the total tourism GVA (TGVA) attributable to the tourism products is evenly divided between regional and non-regional businesses (i.e. just over £1bn in each case). Table 4 reveals that in Accommodation services over 70% of products are destined for tourists (i.e. £416m) and with over half of this GVA accounted by the regionally owned sector. In Food & beverage serving the tourism ratio of product supply is lower at around 29% and of the £346m of GVA attributable to tourism demands some £226m arises in the regionally-owned sector. In Passenger transport services as a whole (i.e. adding together rail, road, water, and air), non-regional firms account for the bulk of tourism GVA by virtue of the high non-regionally owned component in rail. Similarly in Cultural activities etc. tourism products, non-regionally owned firms account for the bulk of tourism GVA. The non-regionally owned tourism-related firms have the largest productivity advantages in sectors that feature lower tourism ratios on supply.

Table 4 about here

Finally this section summarizes additional information derived from the TSA. The results are summarized in Table 5 under the summary heads of financial, purchasing, employment, skills and household income account. Table 5 reveals a number of ways in which tourism industries differ from other Welsh industries, but then important differences between the regional and extra-regional owned sectors.

Table 5 here

For example, Table 5 shows (Financial account) that value added per FTE in the non-regional tourism-related sector is around £82,600 compared to an estimated £32,000 in the regionally-owned sector. So while tourism in Wales has been identified as an industry with relatively low value added characteristics, the analysis here reveals that the non-regionally owned elements, because of their different industrial representation, feature much higher levels of value added per employee. In consequence, when there is a focus on the low value added nature of tourism-related sectors there is a need to carefully differentiate by both sector and ownership.

The Purchasing account in Table 5 indicates that regional tourism businesses source 79% of their non-wage inputs from domestic resident industries, whereas externally-owned ones source 52% inside the region. Clearly, this has implications for the multiplier effects of tourism industry spending, and with these figures reflecting the industry mix of the extra-regionally owned element with purchasing patterns influenced by a lack of regional supply of some goods and services, but also by the purchasing patterns of head offices located elsewhere in the UK and overseas.

The Employment account shows the high proportion of workers born outside Wales in tourism-related sectors, at 40% of those employed in tourism born outside of Wales compared to 33.3% in other sectors. Tourism industries employ people with fewer academic qualifications; for example, 26.2% of the FTEs in Wales are educated to degree or equivalent level, whereas, only 12.3% of the FTEs in tourism industries have obtained this level of education. The Household Income Account shows that 67.1% of FTEs in tourism industries are from a lower income group (claiming state benefits) whereas 31.6% of FTEs overall in Wales are from this lower household income group.

5 Discussion and conclusions

The paper provides three main contributions. First, we show the value of the regional TSA framework in revealing key differences in the economic characteristics of tourism-related sectors based on the ownership of assets. Second, we explain some of the different characteristics found in tourism-related sectors revealing the importance of 'pure' ownership effects differentiated from the issue that externally owned firms are focused in more highly productive tourism-related sectors. Third, we reveal the value of the regional TSA framework as a means of structuring more general economic analysis of regional tourism activity.

The contribution of inward investment in regional tourism activity has hitherto been difficult to examine due to a paucity of data and because of the complexity of tourism industries with their activity only partly supported by tourist demands. The adjusted regional TSA framework adopted in this paper not only provides a way of accounting for the contribution of inward investment in tourism-related sectors, but is also revealed as a means of exploring important issues in tourism such as the quality of human capital use, social elements (income distribution), and how inward investment in tourism industries could affect regional development prospects.

While there is some expectation from theory that extra-regional firms may have very different productivity characteristics from their regional counterparts it has been hitherto difficult to actually establish the scale of these differences in tourism-related sectors of the economy. The improved accounting of differences in tourism-related industries according to ownership in this paper, has shown that generalising on differences between locally owned and externally owned parts of the tourism-related sector is difficult unless information is presented in this type of structured manner.

The paper also shows that common perceptions of tourism demand simply supporting less productive sectors and lesser paid employment might be challenged. In some cases tourism demands support activity of more highly productive sectors supporting better quality employment. In regional economies, discussion of a 'branch plant syndrome' is often restricted

to discussion of manufacturing operations. The 'branch plant syndrome' describes the negative developmental consequences occurring where economies are composed mostly of branch plants of multi-plant firms (Sonn and Lee, 2012). This paper does reveal similar structures in tourism: however, the non-regionally owned element of the tourism industry is found to support significant levels of regional gross value added, and with the extra-regional sector invested in some of the higher productivity parts of the sector. Moreover, analysis within the framework of the TSA allows the analysis of the types of households supported by different types of tourism industry.

The findings suggest that the characteristics of the tourism sector in Wales do differ significantly according to ownership of assets. This needs to be better accounted in studies of the regional and national tourism sector with a strong expectation that the developmental implications of inward investment in tourism industries will be very different from an expansion of the regionally-owned tourism sector. This type of information is important in destination management planning and for policy in regions which seek to strengthen the regionally owned tourism base. Then monies used to support new inward investment in tourism-related sectors are expected to have quite different regional economic consequences from policies supporting indigenous development.

The paper suggests that there are analytical and potential policy benefits following from a re-structuring and refining of the TSA framework to distinguish regional and non-regional ownership in tourism product supply, and to measure the contribution of non-regional firms in tourism industries in terms of GVA, productivity and employment. Indeed, the adoption of this approach at a national scale may deliver additional benefits, in considering how the development of tourism dependent destinations could be affected by dependence on inward investment-for good or ill.

However, there are a number of areas requiring further study. First, in this paper we differentiate externally owned firms from regionally owned firms. While this perspective was justified there could be value in further differentiating foreign from rest of UK firms, and moreover more detailed research examining how different types of tourism demand (i.e. daytripper, UK staying visitor, business visitor, overseas visitor) support activity in the regional or non-regionally owned tourism-related sectors.

Second, only limited attention was given to how far differences in ownership in tourism-related sectors gave rise to different indirect and induced household effects in the regional economy. It was suggested that in the case of externally owned firms the potential for leakages outside the economy was greater. However, here more research needs to be carried out through the integration of the regional tourism satellite account modified for asset ownership with regional input-output tables to explore whether these indirect regional effects vary according to whether tourism-related firms are locally owned or not.

Figure 1 Use of statistical sources in the analysis

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┌─────────────────────────────────────┐     ┌─────────────────────────────────────┐
│ UK Tourism Satellite Account (2013) │     │ UK Tourism Satellite Account (2013) │
│ Business Structure Database (2013)  │     │ International Passenger Survey (2013)│
│ Companies House data                │     │ GB Tourism Survey (2013)            │
│ NOMIS employment data               │     │ GB Day Visitor Survey (2013)        │
│                                     │     │ CAA Passenger Survey (2015)         │
│                                     │     │ Morgan Stanley Airport Survey (2013)│
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┌─────────────────────────────────────┐     ┌─────────────────────────────────────┐
│ SUPPLY :Regional/Non-Regional       │     │ DEMAND for :Regional/Non-Regional   │
│ Tourism- Related Products (GVA,     │     │ Tourism-Related Products            │
│ Output, Taxes less subsidies)- See  │     │                                     │
│ Table 3                             │     │                                     │
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            ┌─────────────────────────────────────────────────┐
            │ Estimation of tourism ratio of supply and       │
            │ demand for Regional/Non-Regional Tourism-       │
            │ Related Products                                │
            └─────────────────────────────────────────────────┘
                 │                                            │
                 ▼                                            ▼
┌─────────────────────────────────────┐     ┌─────────────────────────────────────┐
│ Tourism direct FTE jobs in          │     │ Tourism direct GVA, Output, taxes   │
│ Tourism-Related Products            │     │ less subsidies in Tourism-Related   │
│                                     │     │ Products -See Table 4               │
└─────────────────────────────────────┘     └─────────────────────────────────────┘
                 │
                 ▼
            ┌─────────────────────────────────────────────────┐
            │ Annual Survey of Hours and Earnings (2013)      │
            │ Annual Population Survey  (2013)                │
            │ Primary data collected through 25 interviews    │
            │ and 81 business surveys                         │
            └─────────────────────────────────────────────────┘
                                      │
                                      ▼
            ┌─────────────────────────────────────────────────┐
            │ Summaries in Table 5 of Financial Account;      │
            │ Purchasing Account, Employment Account, Skills  │
            │ and Qualifications Account and Household Income  │
            │ Account                                         │
            └─────────────────────────────────────────────────┘
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Table 1 The constituent tables of Tourism Satellite Account (UN, 2008)

1: Inbound tourism expenditure by products and classes of visitors

2: Domestic tourism expenditure by products, classes of visitors and types of trips

3: Outbound tourism expenditure by products and classes of visitors

4: Internal tourism consumption by products

5: Production accounts of tourism industries and other industries (at basic prices)

6: Total domestic supply and internal tourism consumption (at purchasers' prices)

7: Employment in the tourism industries

8: Tourism gross fixed capital formation of tourism industries and other industries

9: Tourism collective consumption by products and levels of government

10: Non monetary indicators

11: Additional information for TSA

Table 2 Distribution of output: Tourism products in Wales in 2013

products	Output (£million)			Output percentages	
	Total Output	Regional	Non Regional	Regional	Non Regional
Accommodation services	1,322	767	555	58%	42%
Food & beverage serving	2,891	1,890	1,001	65%	35%
Passenger transport services	1,134	246	888	22%	78%
Transport equipment rental	245	72	173	29%	71%
Travel agencies & other	749	416	333	56%	44%
Cultural, sports & exhibition	1,844	570	1,274	31%	69%
Tourism Total	8,185	3,961	4,224	48%	52%

Table 3 Comparison of regionally and externally owned tourism businesses in Wales in 2013

Products	GVA/FTE (£/FTE)			
	Total Wales	Regional	Non Regional	Productivity Difference*
Accommodation services	32,292	26,817	44,975	1.68
Food & beverage serving	28,233	27,317	30,142	1.10
Passenger transport services	79,900	30,997	173,783	5.61
Transport equipment rental	153,934	55,633	601,266	10.81
Travel agencies & other	185,647	152,091	256,342	1.69
Cultural, sports & exhibition	74,951	31,569	196,445	6.22
Wales GVA	47,549	31,976	82,614	2.58

*Note: Productivity difference is the Non Regional GVA/FTE divided by Regional GVA/FTE

Table 4: GVA, TGVA of tourism related industries and TGVA as a percentage of total GVA in Wales

Products	GVA (£million)			Tourism Ratio	TGVA (£million)		
	Total Wales	Regional	Non Regional		Total Wales	Regional	Non Regional
Accommodation services	588	341	247	70.8%	416	241	175
Food & beverage serving	1,181	772	409	29.3%	346	226	120
Passenger transport services	543	138	407	23.8%	129	33	97
Transport equipment rental	135	40	95	3.5%	5	1	3
Travel agencies & other	432	240	192	25.2%	109	61	48
Cultural, sports & exhibition	1,234	383	851	9.5%	117	36	81
Other consumption products	61,143	28,428	32,715	1.6%	978	455	523
Wales GVA	65,256	30,342	34,916	3.3%	2,101	1,053	1,048
TGVA/Wales GVA					3.2%	3.5%	3.0%

Table 5 Additional information for TSA: Wales 2013

Products	Tourism industries TOTAL			Other industries			Output of domestic producers (at basic prices)		
	Total Wales	Regional	Non Regional	Total Wales	Regional	Non Regional	Total Wales	Regional	Non Regional
Financial account (£m unless specified otherwise)									
TOTAL INTERMEDIATE CONSUMPTION (at purchasers prices)	4,071	2,048	2,023	53,132	26,732	26,400	57,202	28,780	28,422
TOTAL GROSS VALUE ADDED (at basic prices)	4,114	1,913	2,201	61,143	28,428	32,715	65,257	30,341	34,916
Taxes less subsidies on production	449	317	130	6,847	3,201	3,646	1,285	602	683
Mixed & self-employed Income	477	236	241	2,438	1,882	556	2,915	2,250	665
Compensation of Employees	1,603	834	766	29,998	23,159	6,839	31,601	24,396	7,205
Other Value Added	1,586	526	1,064	21,859	186	21,673	29,456	3,092	26,363
Value Added per FTE (£000)	47.6	32.0	82.6	63.0	38.0	147.9	66.8	40.2	156.7
Taxes less subsidies per £1m output (£000)	54.8	79.9	30.7	58.1	58.1	58.1	102.0	102.0	102.0
Value Added per £1m output (£000)	502.7			518.8			518.1		
Purchasing account (£m)									
Domestic resident industries	2,670	1,618	1,052	*	*	*	*	*	*
Foreign resident industries	860	158	702	*	*	*	*	*	*
Imports	541	272	269	19,158	9,639	9,519	19,699	9,911	9,788
Total Intermediate Purchases	4,071	2,048	2,023	53,132	26,732	26,400	57,202	28,780	28,422

	Tourism industries TOTAL			Other industries			All domestic producers		
Employment account (FTE)									
	Total Wales	Regional	Non Regional	Total Wales	Regional	Non Regional	Total Wales	Regional	Non Regional
Full-Time	50,464	33,418	17,043	717,315	553,769	163,546	767,779	592,727	175,052
Part-Time	72,072	48,414	23,656	347,322	268,133	79,189	419,394	323,773	95,621
Country of birth (Wales)	52,022	36,022	16,000	652,340	503,608	148,732	651,886	503,258	148,628
Country of birth (UK)	26,976	18,685	8,291	264,743	204,382	60,361	269,653	208,173	61,480
Country of birth (Rest of World)	7,502	5,152	2,350	52,891	40,832	12,059	55,937	43,183	12,753
Total FTE	86,500	59,858	26,642	890,976	687,836	203,140	977,476	754,614	222,862
Compensation per FTE (£000s)	18.5	13.9	28.7	33.7			32.3		
Skills and qualifications account (FTE)									
Degree or equivalent	14,093			247,400			256,447		
Higher education	6,704			100,297			105,774		
GCE, A-level or equivalent	22,317			221,791			242,984		
GCSE grades A*-C or equivalent	24,495			185,015			211,677		
Other qualifications	10,807			68,603			83,292		
No qualification	6,974			55,966			64,160		
Did not know	1,173			11,902			13,141		
Total FTE	86,500			890,976			977,476		
Household income account									
Claiming (other) State Benefits	97,373			333,448			375,308		
Not claiming (other) State Benefits	47,773			712,604			811,864		
Total Employment	145,146			1,042,026			1,187,172		

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Appendix A, Summary TSA-Tables 5, 7

Table A1, TSA-TABLE 5: Production accounts of tourism industries and other industries (at basic prices in £millions), 2013

Products	Accommodation for visitors			Food and beverage serving industry			Passenger transport			Transport equipment rental		
	Total Wales	Regional	Non Regional	Total Wales	Regional	Non Regional	Total Wales	Regional	Non Regional	Total Wales	Regional	Non Regional
Accommodation services for visitors	891	610	281	91	60	32	0	0	0	0	0	0
Food and beverage serving activities	345	75	270	2,739	1,791	949	7	1	6	0	0	0
Passenger transport services	0	0	0	0	0	0	1,093	241	852	0	0	0
Transport equipment rental services	1	1	0	3	2	1	20	2	18	238	70	168
Travel agencies & other reservation services	0	0	0	0	0	0	0	0	0	0	0	0
Cultural, sports & exhibition activities	1	0	0	8	5	3	1	0	1	2	0	1
Other consumption products	6	4	3	49	32	17	14	1	12	5	2	4
TOTAL OUTPUT	1,322	767	555	2,891	1,890	1,001	1,134	246	888	245	72	173
TOTAL INTERMEDIATE CONSUMPTION (at purchasers prices)	734	426	308	1,710	1,118	592	591	109	482	110	32	78
TOTAL GROSS VALUE ADDED (at basic prices)	588	341	247	1,181	772	409	543	137	406	135	40	95

TSA-TABLE 5 (continued)

Products	Travel agencies and other reservation services industry			Cultural, sports & exhibition activities			Tourism Industries TOTAL			Other industries			Output of domestic producers (at basic prices)		
	Total Wales	Regional	Non Regional	Total Wales	Regional	Non Regional	Total Wales	Regional	Non Regional	Total Wales	Regional	Non Regional	Total Wales	Regional	Non Regional
Accommodate services for visitors	0	0	0	2	1	1	985	670	314	31	21	10	1,016	691	324
Food and beverage serving activities	0	0	0	72	23	50	3,164	1,890	1,275	645	385	260	3,810	2,275	1,534
Passenger transport services	0	0	0	0	0	0	1,093	241	852	217	119	98	1,310	360	950
Transport equipment rental services	7	4	3	18	6	12	286	84	202	148	43	104	434	128	306
Travel agencies & other reservation services	150	83	67	0	0	0	150	83	67	0	0	0	150	83	67
Cultural, sports & exhibition activities	1	1	0	1,537	474	1,062	1,549	481	1,068	1,777	253	1,524	3,326	735	2,592
Other consumption products	591	328	263	215	67	149	881	434	447	115,027	65,778	49,249	115,907	66,211	49,696
TOTAL OUTPUT	749	416	333	1,844	570	1,274	8,185	3,961	4,224	117,844	55,089	62,755	125,952	59,050	66,979
TOTAL INTERMEDIATE CONS (purchasers prices)	317	176	141	609	187	422	4,071	2,048	2,023	53,132	26,732	26,400	57,202	28,780	28,422
TOTAL GVA (at basic prices)	432	240	192	1,234	383	851	4,114	1,913	2,201	61,143	28,428	32,715	65,256	30,342	34,916

Table A2, TSA-TABLE 7 Extended: Employment in the tourism industries in Wales, 2013									
	FTE			GVA/FTE			Output/FTE		
Tourism Characteristic Activities	Total	Regional	Non Regional	Total	Regional	Non Regional	Total	Regional	Non Regional
Accommodation services for visitors	18,209	12,716	5,492	32,292	26,817	44,975	72,601	60,318	101,056
Food and beverage serving activities	41,830	28,261	13,569	28,233	27,317	30,142	69,113	66,877	73,771
Passenger transport services	6,796	4,452	2,342	79,900	30,997	173,783	166,863	55,256	379,163
Transport equipment rental services	877	719	158	153,934	55,633	601,266	279,361	100,139	1,094,937
Travel agencies & other reservation services	2,327	1,578	749	185,647	152,091	256,342	321,874	263,625	444,593
Cultural, sports & exhibition activities	16,464	12,132	4332	74,951	31,569	196,445	112,002	46,983	294,090
Tourism Totals	86,500	59,858	26,642	47,549	31,976	82,614	94,624	66,173	158,547

Appendix B, Business and Location Coverage of Survey Returns and Interviews Undertaken

Participants	Businesses and Locations	Interviews (25)	Surveys (81)	Total (106)
Type of Businesses	Accommodation	5	47	52
	Restaurant	1	4	5
	Tourist Attractions	15	30	49
	Other Businesses	4		
Region of Wales	Llandudno and Colwyn Bay	3	7	10
	Anglesey	0	1	1
	Denbighshire	0	8	8
	Snowdonia	1	8	9
	Ceredigion	0	3	3
	Mid Wales and Brecon Beacons	2	18	20
	Cardiff	3	6	9
	South Wales Valleys	3	2	5
	Wye Valley and Vale of Usk	2	7	9
	Glamorgan Heritage Coast and Countryside	4	2	6
	Carmarthenshire	2	5	7
	Pembrokeshire	3	8	11
	Swansea	2	4	6
	Other Locations	0	2	2
Themes Covered	Business types, Turnover, Employment, Impact of Brexit, Inputs and local sourcing, Customers origin, Relevant comments.			